SUBJECT INDEX

Absorption
  hydrogen absorption in the Zr–Al system, 227
Actinides
  contribution to the knowledge of the electrochemical properties of actinides in non-aqueous media. I: The reduction of tetravalent uranium in various organic solvents, 185
Aluminium
  hydrogen absorption in the Zr–Al system, 227
  quasicrystals in rapidly solidified alloys of Al–Pt group metals-I. An overview of quasicrystals in aluminium–transition metal alloys, 9

Barium
  a contribution to the $SrCa_2Lu_{10}O_{18}$ type compounds. On element distribution in $Ba_2Ca_5Dy_{18}ZrO_{36}$, 357
  low temperature specific heat and superconductivity related to microstructure and magnetism of orthorhombic and tetragonal phases of $YBa_2Cu_3O_{(7-x)}$, 321
Boron
  structural changes during heating of amorphous alloys Ni–Nb–B, (Ni, Co)–Nb–B, L1
  on the low temperature canted ferrimagnetic structures of $Er_2Fe_{14}B$ and $Tm_2Fe_{14}B$, 219
  the ternary system La–Cu–B at 650 °C and some remarks on the La–Cu system, 79

Caesium
  synthesis and characterization of caesium tetrachlorouranate(III)tetrahydrate, 159
Calcium
  a contribution to the $SrCa_2Lu_{10}O_{18}$ type compounds. On element distribution in $Ba_2Ca_5Dy_{18}ZrO_{36}$, 357
Carbides
  crystal and magnetic structure of the permanent magnet material $Lu_2Fe_{14}C$, 371
  magnetic structure of ternary rare earth carbides of the type $R_2Fe_{17}C$, 363
  microhardness of non-stoichiometric TiC_x plates prepared by chemical vapour deposition, 349
Chemical vapour deposition
  microhardness of non-stoichiometric TiC_x plates prepared by chemical vapour deposition, 349
Chlorine
  preparation of tungsten and tungsten carbide submicron powders in a chlorine–hydrogen flame by the chemical vapor phase reaction, 269
Chromium
  on the structural and hydrogen desorption properties of the $Zr(Cr_{1-x}Ni_x)_2$ alloys, 151
  oxidation of Mo–W–Cr–Pd alloys, 51
Cobalt
  structural changes during heating of amorphous alloys Ni–Nb–B, (Ni, Co)–Nb–B, L1
  magnetic domain structures, domain wall energies and magnetization processes in $UFe_{10}Si_2$ and $UCo_{10}Si_2$ intermetallic compounds, 115
Copper
  low temperature specific heat and superconductivity related to microstructure and magnetism of orthorhombic and tetragonal phases of $YBa_2Cu_3O_{(7-x)}$, 321
  phase relations and oxygen potentials in the Cu–"Cu_2O_3"–Y_2O_3 system, 143
  phase relations in the system Cu–Mo–S, 281
  the ternary system La–Cu–B at 650 °C and some remarks on the La–Cu system, 79
Crystal structure
  a new phase in the Nd–Fe system: crystal structure of Nd_5Fe_{17}, 245
  crystal and magnetic structure of the permanent magnet material $Lu_2Fe_{14}C$, 371
  crystal structure of phase of the Yb–Ga system in the range 20–32 at.% Yb, 341
Crystallographic structure
  crystallographic and magnetic structure of Dy_3Ge_5 and $DyGe_{1.9}$, 329

Domain wall energies
  magnetic domain structures, domain wall

energies and magnetization processes in $UFe_{10}Si_2$ and $UCo_{10}Si_2$ intermetallic compounds, 115
Dysprosium
a contribution to the $SrCa_2Lu_{10}O_{18}$ type compounds. On element distribution in $Ba_2Ca_5Dy_{18}ZrO_{36}$, 357
crystallographic and magnetic structure of Dy_3Ge_5 and $DyGe_{1.9}$, 329

Electrochemical properties
contribution to the knowledge of the electrochemical properties of actinides in non-aqueous media. I: The reduction of tetravalent uranium in various organic solvents, 185
Energy levels
investigation of the ^5D_J levels in europium (Eu^{3+}) compounds: full f^6 calculation, 287
Energy of formation
standard Gibbs free energy of formation of SrOS, 109
Erbium
on the low temperature canted ferrimagnetic structures of $Er_2Fe_{14}B$ and $Tm_2Fe_{14}B$, 219
$R_2Ru_3Si_5$ (R = Er, Tb) with the orthorhombic $U_2Co_3Si_5$-type structure and $R_2Ru_3Si_{4.6}$ (R = Gd, Tb, Dy, Ho, Er) and $R_2Os_3Si_{4.6}$ (R + Tb, Er) with the tetragonal $Sc_2Fe_4Si_5$-type structure, L13
Europium
investigation of the ^5D_J levels in europium (Eu^{3+}) compounds: full f^6 calculation, 287

Fe–Nd system
solidification and solid state transformations in Fe–Nd: a revised phase diagram, 209
Ferrimagnetic structures
on the low temperature canted ferrimagnetic structures of $Er_2Fe_{14}B$ and $Tm_2Fe_{14}B$, 219

Gallium
crystal structure of phase of the Yb–Ga system in the range 20–32 at.% Yb, 341
$MnGaScS_4$ and $MnGa_{1.5}Sc_{0.5}S_4$, two new compounds in the system $MnGa_2S_4$–$MnSc_2S_4$, 253
Germanium
crystallographic and magnetic structure of Dy_3Ge_5 and $DyGe_{1.9}$, 329

Hafnium
determination of phase equilibria in the systems Y–Zr–Mo and Y–Hf–Mo at 1273 K, 263
phase equilibria and structural stability of intermetallics in the Pt–Pd–Hf and Pt–Pd–Zr systems, 1
ternary equiatomic hafnium–transition metal silicides, L7
High temperature vapourization
high temperature vaporization and thermodynamic study of the Nd–S system, 173
Hydrogen
hydrogen absorption in the Zr–Al system, 227
preparation of tungsten and tungsten carbide submicron powders in a chlorine–hydrogen flame by the chemical vapor phase reaction, 269
Hydrogen desorption
on the structural and hydrogen desorption properties of the $Zr(Cr_{1-x}Ni_x)_2$ alloys, 151
Hydrogen sorption
surface properties and their consequences on the hydrogen sorption characteristics of certain materials, 89
Hyperfine field anisotropy
hyperfine field anisotropy and spin reorientation in ternary carbides of the type $R_2Fe_{17}C_x$, 165

Intermetallics
magnetic domain structures, domain wall energies and magnetization processes in $UFe_{10}Si_2$ and $UCo_{10}Si_2$ intermetallic compounds, 115
phase equilibria and structural stability of intermetallics in the Pt–Pd–Hf and Pt–Pd–Zr systems, 1
surface properties and their consequences on the hydrogen sorption characteristics of certain materials, 89
Iridium
quasicrystals in rapidly solidified alloys of Al–Pt group metals–III. Quasicrystals in rapidly solidified Al–Rh and Al–Ir alloys, 27
Iron
a new phase in the Nd–Fe system: crystal structure of Nd_5Fe_{17}, 245
crystal and magnetic structure of the permanent magnet material $Lu_2Fe_{14}C$, 371
magnetic structure of ternary rare earth carbides of the type $R_2Fe_{17}C$, 363
on the low temperature canted ferrimagnetic structures of $Er_2Fe_{14}B$ and $Tm_2Fe_{14}B$, 219

$KMgH_3$
$KMgH_3$ single crystals by synthesis from the elements, 179

Lanthanum
the ternary system La–Cu–B at 650 °C and some remarks on the La–Cu system, 79
Lutetium
a contribution to the $SrCa_2Lu_{10}O_{18}$ type compounds. On element distribution in $Ba_2Ca_5Dy_{18}ZrO_{36}$, 357
crystal and magnetic structure of the permanent magnet material $Lu_2Fe_{14}C$, 371

Magnesium
$KMgH_3$ single crystals by synthesis from the elements, 179
Magnetic coupling
magnetic coupling in the tetragonal rare earth iron compounds of the type $R(Fe, V)_{12}$, 123
Magnetic domain structures
magnetic domain structures, domain wall energies and magnetization processes in $UFe_{10}Si_2$ and $UCo_{10}Si_2$ intermetallic compounds, 115
Magnetic structure
crystal and magnetic structure of the permanent magnet material $Lu_2Fe_{14}C$, 371
crystallographic and magnetic structure of Dy_3Ge_5 and $DyGe_{1.9}$, 329
magnetic structure of ternary rare earth carbides of the type $R_2Fe_{17}C$, 363
Magnetism
comments on structure, vibrational spectrum and magnetism of $SrUO_4$, L19
Magnets
crystal and magnetic structure of the permanent magnet material $Lu_2Fe_{14}C$, 371
Manganese
$MnGaScS_4$ and $MnGa_{1.5}Sc_{0.5}S_4$, two new compounds in the system $MnGa_2S_4$–$MnSc_2S_4$, 253
Microhardness
microhardness of non-stoichiometric TiC_x plates prepared by chemical vapour deposition, 349
Molybdenum
determination of phase equilibria in the systems Y–Zr–Mo and Y–Hf–Mo at 1273 K, 263
mutual oxidation states of uranium and molybdenum in U–Mo–O ternary oxides, 133
oxidation of Mo–W–Cr–Pd alloys, 51
phase relations in the system Cu–Mo–S, 281

Neodymium
a new phase in the Nd–Fe system: crystal structure of Nd_5Fe_{17}, 245
high temperature vaporization and thermodynamic study of the Nd–S system, 173
solidification and solid state transformations in Fe–Nd: a revised phase diagram, 209
Nickel
structural changes during heating of amorphous alloys Ni–Nb–B, (Ni, Co)–Nb–B, L1
on the structural and hydrogen desorption properties of the $Zr(Cr_{1-x}Ni_x)_2$ alloys, 151
Niobium
structural changes during heating of amorphous alloys Ni–Nb–B, (Ni, Co)–Nb–B, L1

Osmium
quasicrystals in rapidly solidified alloys of Al–Pt group metals–II. Quasicrystals in rapidly solidified Al–Ru and Al–Os alloys, 19
$R_2Ru_3Si_5$ (R = Er, Tb) with the orthorhombic $U_2Co_3Si_5$-type structure and $R_2Ru_3Si_{4.6}$ (R = Gd, Tb, Dy, Ho, Er) and $R_2Os_3Si_{4.6}$ (R + Tb, Er) with the tetragonal $Sc_2Fe_4Si_5$-type structure, L13
Oxidation
oxidation of Mo–W–Cr–Pd alloys, 51
Oxides
low temperature specific heat and superconductivity related to microstructure and magnetism of orthorhombic and tetragonal phases of $YBa_2Cu_3O_{(7-z)}$, 321
Oxygen
a contribution to the $SrCa_2Lu_{10}O_{18}$ type compounds. On element distribution in $Ba_2Ca_5Dy_{18}ZrO_{36}$, 357
Oxygen potentials
phase relations and oxygen potentials in the Cu–"Cu_2O_3"–Y_2O_3 system, 143

Palladium
oxidation of Mo–W–Cr–Pd alloys, 51
phase equilibria and structural stability of intermetallics in the Pt–Pd–Hf and Pt–Pd–Zr systems, 1

quasicrystals in rapidly solidified alloys of Al–Pt group metals–IV. Quasicrystals in rapidly solidified Al–Pd and Al–Pt alloys, 37
Phase diagrams
solidification and solid state transformations in Fe–Nd: a revised phase diagram, 209
Phase equilibria
determination of phase equilibria in the systems Y–Zr–Mo and Y–Hf–Mo at 1273 K, 263
phase equilibria and structural stability of intermetallics in the Pt–Pd–Hf and Pt–Pd–Zr systems, 1
Phase relations
phase relations and oxygen potentials in the Cu–"Cu_2O_3"–Y_2O_3 system, 143
phase relations in the system Cu–Mo–S, 281
Photoexcitation
vacancy complex scattering mobility of holes in IR-photoexcited p-type ZnTe, 63
Platinum
phase equilibria and structural stability of intermetallics in the Pt–Pd–Hf and Pt–Pd–Zr systems, 1
quasicrystals in rapidly solidified alloys of Al–Pt group metals–IV. Quasicrystals in rapidly solidified Al–Pd and Al–Pt alloys, 37
Potassium
$KMgH_3$ single crystals by synthesis from the elements, 179

Quasicrystals
quasicrystals in rapidly solidified alloys of Al–Pt group metals–I. An overview of quasicrystals in aluminium–transition metal alloys, 9
quasicrystals in rapidly solidified alloys of Al–Pt group metals–II. Quasicrystals in rapidly solidified Al–Ru and Al–Os alloys, 19
quasicrystals in rapidly solidified alloys of Al–Pt group metals–III. Quasicrystals in rapidly solidified Al–Rh and Al–Ir alloys, 27
quasicrystals in rapidly solidified alloys of Al–Pt group metals–IV. Quasicrystals in rapidly solidified Al–Pd and Al–Pt alloys, 37

Rapidly solidified alloys
quasicrystals in rapidly solidified alloys of Al–Pt group metals–I. An overview of quasicrystals in aluminium–transition metal alloys, 9
quasicrystals in rapidly solidified alloys of Al–Pt group metals–II. Quasicrystals in rapidly solidified Al–Ru and Al–Os alloys, 19
quasicrystals in rapidly solidified alloys of Al–Pt group metals–III. Quasicrystals in rapidly solidified Al–Rh and Al–Ir alloys, 27
quasicrystals in rapidly solidified alloys of Al–Pt group metals–IV. Quasicrystals in rapidly solidified Al–Pd and Al–Pt alloys, 37
Rare earths
magnetic coupling in the tetragonal rare earth iron compounds of the type $R(Fe, V)_{12}$, 123
magnetic structure of ternary rare earth carbides of the type $R_2Fe_{17}C$, 363
Rhodium
quasicrystals in rapidly solidified alloys of Al–Pt group metals–III. Quasicrystals in rapidly solidified Al–Rh and Al–Ir alloys, 27
Ruthenium
quasicrystals in rapidly solidified alloys of Al–Pt group metals–II. Quasicrystals in rapidly solidified Al–Ru and Al–Os alloys, 19
$R_2Ru_3Si_5$ (R = Er, Tb) with the orthorhombic $U_2Co_3Si_5$-type structure and $R_2Ru_3Si_{4.6}$ (R = Gd, Tb, Dy, Ho, Er) and $R_2Os_3Si_{4.6}$ (R + Tb, Er) with the tetragonal $Sc_2Fe_4Si_5$-type structure, L13

Scandium
$MnGaScS_4$ and $MnGa_{1.5}Sc_{0.5}S_4$, two new compounds in the system $MnGa_2S_4$–$MnSc_2S_4$, 253
Scattering mobility
vacancy complex scattering mobility of holes in IR-photoexcited p-type ZnTe, 63
Selenium
the thermodynamics of sublimation and formation of ytterbium(II)selenide, 199
Silicides
ternary equiatomic hafnium–transition metal silicides, L7
Silicon
magnetic domain structures, domain wall energies and magnetization processes in $UFe_{10}Si_2$ and $UCo_{10}Si_2$ intermetallic compounds, 115
$R_2Ru_3Si_5$ (R = Er, Tb) with the orthorhombic

$U_2Co_3Si_5$-type structure and $R_2Ru_3Si_{4.6}$ (R = Gd, Tb, Dy, Ho, Er) and $R_2Os_3Si_{4.6}$ (R + Tb, Er) with the tetragonal $Sc_2Fe_4Si_5$-type structure, L13
Single crystals
$KMgH_3$ single crystals by synthesis from the elements, 179
Solid state transformations
solidification and solid state transformations in Fe–Nd: a revised phase diagram, 209
Specific heat
low temperature specific heat and superconductivity related to microstructure and magnetism of orthorhombic and tetragonal phases of $YBa_2Cu_3O_{(7-x)}$, 321
Spin reorientation
hyperfine field anisotropy and spin reorientation in ternary carbides of the type $R_2Fe_{17}C_x$, 165
Strontium
a contribution to the $SrCa_2Lu_{10}O_{18}$ type compounds. On element distribution in $Ba_2Ca_5Dy_{18}ZrO_{36}$, 357
comments on structure, vibrational spectrum and magnetism of $SrUO_4$, L19
Structural properties
on the structural and hydrogen desorption properties of the $Zr(Cr_{1-x}Ni_x)_2$ alloys, 151
Structure
comments on structure, vibrational spectrum and magnetism of $SrUO_4$, L19
structural changes during heating of amorphous alloys Ni–Nb–B, (Ni, Co)–Nb–B, L1
$R_2Ru_3Si_5$ (R = Er, Tb) with the orthorhombic $U_2Co_3Si_5$-type structure and $R_2Ru_3Si_{4.6}$ (R = Gd, Tb, Dy, Ho, Er) and $R_2Os_3Si_{4.6}$ (R + Tb, Er) with the tetragonal $Sc_2Fe_4Si_5$-type structure, L13
Sublimation
the thermodynamics of sublimation and formation of ytterbium(II)selenide, 199
Sulphur
$MnGaScS_4$ and $MnGa_{1.5}Sc_{0.5}S_4$, two new compounds in the system $MnGa_2S_4$–$MnSc_2S_4$, 253
phase relations in the system Cu–Mo–S, 281
Superconductivity
low temperature specific heat and superconductivity related to microstructure and magnetism of orthorhombic and tetragonal phases of $YBa_2Cu_3O_{(7-x)}$, 321
Surface properties
surface properties and their consequences on the hydrogen sorption characteristics of certain materials, 89

Tellurium
thermochemical characterization of binary tellurium–metal systems, 297
vacancy complex scattering mobility of holes in IR-photoexcited p-type ZnTe, 63
Terbium
$R_2Ru_3Si_5$ (R = Er, Tb) with the orthorhombic $U_2Co_3Si_5$-type structure and $R_2Ru_3Si_{4.6}$ (R = Gd, Tb, Dy, Ho, Er) and $R_2Os_3Si_{4.6}$ (R + Tb, Er) with the tetragonal $Sc_2Fe_4Si_5$-type structure, L13
Ternary carbides
hyperfine field anisotropy and spin reorientation in ternary carbides of the type $R_2Fe_{17}C_x$, 165
Ternary oxides
mutual oxidation states of uranium and molybdenum in U–Mo–O ternary oxides, 133
Ternary phase equilibria
the ternary system La–Cu–B at 650 °C and some remarks on the La–Cu system, 79
Thermochemical characterization
thermochemical characterization of binary tellurium–metal systems, 297
Thermodynamics
high temperature vaporization and thermodynamic study of the Nd–S system, 173
the thermodynamics of sublimation and formation of ytterbium(II)selenide, 199
Thulium
on the low temperature canted ferrimagnetic structures of $Er_2Fe_{14}B$ and $Tm_2Fe_{14}B$, 219
Titanium
microhardness of non-stoichiometric TiC_x plates prepared by chemical vapour deposition, 349
Transition metal alloys
quasicrystals in rapidly solidified alloys of Al–Pt group metals–I. An overview of quasicrystals in aluminium–transition metal alloys, 9
Transition metals
ternary equiatomic hafnium–transition metal silicides, 507
Tungsten
oxidation of Mo–W–Cr–Pd alloys, 51
preparation of tungsten and tungsten carbide submicron powders in a chlorine–hydrogen flame by the chemical vapor phase reaction, 269

Tungsten carbide
preparation of tungsten and tungsten carbide submicron powders in a chlorine–hydrogen flame by the chemical vapor phase reaction, 269

Uranium
comments on structure, vibrational spectrum and magnesium of $SrUO_4$, L19
contribution to the knowledge of the electrochemical properties of actinides in non-aqueous media. I: The reduction of tetravalent uranium in various organic solvents, 185
magnetic domain structures, domain wall energies and magnetization processes in $UFe_{10}Si_2$ and $UCo_{10}Si_2$ intermetallic compounds, 115
mutual oxidation states of uranium and molybdenum in U–Mo–O ternary oxides, 133
synthesis and characterization of caesium tetrachlorouranate(III)tetrahydrate, 159

Vacancy complexes
vacancy complex scattering mobility of holes in IR–photoexcited p-type ZnTe, 63
Vanadium
magnetic coupling in the tetragonal rare earth iron compounds of the type $R(Fe, V)_{12}$, 123
Vapor phase reaction
preparation of tungsten and tungsten carbide submicron powders in a chlorine–hydrogen flame by the chemical vapor phase eaction, 269
Vibrational spectra
comments on structure, vibrational spectrum and magnetism of $SrUO_4$, L19

Ytterbium
crystal structure of phase of the Yb–Ga system in the range 20–32 at.% Yb, 341
the thermodynamics of sublimation and formation of ytterbium(II)selenide, 199
Yttrium
determination of phase equilibria in the systems Y–Zr–Mo and Y–Hf–Mo at 1273 K, 263
low temperature specific heat and superconductivity related to microstructure and magnetism of orthorhombic and tetragonal phases of $YBa_2Cu_3O_{(7-x)}$, 321
phase relations and oxygen potentials in the Cu–"Cu_2O_3"–Y_2O_3 system, 143

Zinc
vacancy complex scattering mobility of holes in IR–photoexcited p-type ZnTe, 63
Zirconium
magnetic structure of ternary rare earth carbides of the type $R_2Fe_{17}C$, 363
hydrogen absorption in the Zr–Al system, 227
on the structural and hydrogen desorption properties of the $Zr(Cr_{1-x}Ni_x)_2$ alloys, 151
phase equilibria and structural stability of intermetallics in the Pt–Pd–Hf and Pt–Pd–Zr systems, 1
standard Gibbs free energy of formation of ZrOS, 109
ZrOS
standard Gibbs free energy of formation of ZrOS, 109